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STANDARD FORM NO. 64

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Office Memorandum • UNITED STATES GOVERNMENT

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TO : The Files - T. O. 5 CONFIDENTIAL DATE: 31 December 1958 25X1

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FROM :

SUBJECT: Conference Report -

1. On 12 December 1958 a conference was held at Alcott Hall 25X1
between representatives of and 25X1
this Agency to discuss three programs proposed as a possible 25X1
continuation of the Radio Circuit Development project. Persons present
at this discussion were:

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- CIA 25X1

- CIA 25X1

2. The attached memorandum was solicited to ascertain 25X1
whether or not there were new developments or techniques that could
be exploited by this Agency under the Radio Circuit Development
Program, Project 2110. A brief description is given here of each of
the three proposed programs. For a more comprehensive picture of
each, it is recommended that the reader refer to the Attachment.

PROGRAM "A" - In general this program is a continuation of
Contract T. O. 5, wherein the components and techniques developed, 25X1
but not completely understood, for inclusion in the deliverable items of
this contract are to be given consideration. proposes 25X1
construct and develop two receivers utilizing differently design
amplifiers. The first receiver will employ double conversion whose
selectivity will be determined by ceramic resonators. The second
receiver will employ single conversion with the IF selectivity
determined by a crystal filter. These two items could them be evaluated
by comparison of electrical performance and physical size.

PROGRAM "B" - Proposes to develop a communications receiver employ-
ing a tunable IF amplifier such as the 51J-4 Receiver and to be tunable
over a few narrow bands between 3 to 30 mc. Here modular construction
is to be employed, whereby, the RF amplifier, RF oscillator, tunable IF
amplifier and the audio amplifier would be constructed as separate
packages. These packages could then be evaluated separately or together
as a complete receiver.

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PROGRAM "C" - This program proposes to exploit the capacitive and inductive properties of crystal diodes and common base transistor stages. For an explanation it is best to review the last page of the Attachment. Circuit A illustrates a conventional receiver circuit. Circuit B illustrated how the fixed capacitance and inductances have been replaced by crystal diodes and common based transistors. Circuit C illustrates a receiver constructed solely from a combination of semiconductor junctions through crystal growth. It is readily seen that the risks involved here to deliver a physical item are high, but if successful, a microminiature receiver would be available for agent work.

3. In each of the above three programs no attempt would be made to accomplish maximum miniaturization of the deliverable items, but the packages would be built with the smallest components available on the market.

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Attachment - As above

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